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Child Study Outlines.

SECOND SERIES.

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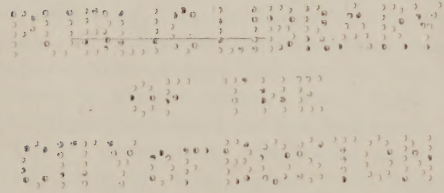
Series 2

BY

WILL S. MONROE.

DEPARTMENT OF PSYCHOLOGY, STATE NORMAL SCHOOL,
WESTFIELD, MASS.



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STATE NORMAL SCHOOL,

WESTFIELD, MASS.

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Child Study Outlines: Second Series.

Series 2.

I. CHILDREN'S SPONTANEOUS DRAWINGS.

Drawing to the child is a language for the expression of his ideas; and form, pure and simple, constitutes a very small modicum in his interest.—*Frederic L. Burk.*

I. TEST.

Give the children paper and pencil. Have each child write his name (or sex) and age at the top of the sheet. Read the story but once. After you have read it to them, ask them to illustrate the story; and that they may make as many drawings as they think necessary to tell the story. As an aid in the collating the drawings, the children might be asked to write under each drawing the part of the story it was intended to represent. But do not tell the children what they are to draw, and make no other suggestions. They should be given from twenty to thirty minutes. *The purpose of the study is to ascertain the way in which children think*, not to test their technical treatment of drawing. Read the story in the exact words as here given:

When George Washington was a little boy his father said to him one morning: "George, this is your birthday. I am going to town to-day and when I return I will bring you a birthday present." The father returned home in the afternoon and handed George a package. He opened it and found that it contained a bright new hatchet. Of course he wanted to try it at once; so he went out to the wood-pile back of the house and cut some wood. But he thought that he would like to try his hatchet on something else; so he went into the orchard and chopped down a cherry tree. His father came out to the orchard just after the tree had fallen and when George saw him coming he stepped behind a tree. When the father saw the tree on the ground he stopped and called out in a loud voice: "Who has cut down my favorite cherry tree?" George came from behind the tree and said; "I cannot tell a lie, father, I did it with my little hatchet." His father told him that he was very sorry to lose his best cherry tree; but that he would rather have him chop down a thousand cherry trees than to tell one lie.

II. CLASSIFICATION.

(*a*). *Individual drawings:* 1. George; 2. George's father; 3. package; 4. hatchet; 5. house; 6. wood-pile; 7. cherry-tree; 8. orchard.

(*b*). *Action drawings:* 1. Father promising Geo. a present; 2. depart-

ure (and return) of father; 3. father handing Geo. the package (hatchet); 4. Geo. opening the package; 5. Geo. holding the hatchet; 6. Geo. chopping wood; 7. Geo. by the cherry-tree; 8. Geo. chopping the cherry-tree; 9. cherry-tree falling; 10. cherry-tree fallen; 11. Geo. hiding; 12. father discovering the tree; 13. Geo. explaining. (*c*). *Added details:* 1. Capitol at Washington; 2. tomb at Mt. Vernon; 3. Other added details. (*d*). *Representation of human figures:* 1. Front view; 2. profile; 3. back view.

III. PEDAGOGICAL QUESTIONS.

1. What scenes of a story appeal most strongly to the imagination of boys and girls at different ages? 2. What features of the story are oftenest reproduced? 3. Do girls draw more scenes than boys. 4. What details are furnished by the children themselves? 5. What new combinations and arrangements are undertaken? 6. How do they represent the human figure?

IV. LITERATURE.

1. J. Mark Baldwin: Mental Development in the Child and the Race. New York, 1896. 2. Earl Barnes: A Study on Children's Drawings. *Pedagogical Seminary*, December, 1893. 3. Earl Barnes: Notes on Drawing. *Studies in Education*. 4. Frank S. Bogardus: An Individual Study of Drawings Made by First-Grade Pupils. *Transactions of Illinois Society for Child Study*, 1896. 5. H. P. Bowditch: Notes on Children's Drawings. *Pedagogical Seminary*, December, 1891. 6. Elmer E. Brown: Notes on Children's Drawings. Berkeley, 1896. 7. Frederic L. Burk: The Genetic versus the Logical Order in Education. *Pedagogical Seminary*, 1897. 8. Arthur B. Clark: The Child's Attitude Toward Perspective Problem. *Studies in Education*. 9. John S. Clarke: Some Observations on Children's Drawings. *Educational Review*, January, 1897. 10. E. Cooke: Art Teaching and Child Nature. *Journal of Education*, London, December, 1885, and January, 1886. 11. G. Stanley Hall: Contents of Children's Minds on Entering School. *Pedagogical Seminary*, June, 1891. 12. Mary A. Herrick: Children's Drawings. *Pedagogical Seminary*, October, 1895. 13. Mary Dana Hicks: Art in Early Education. *Kindergarten Magazine*, April, 1894. 14. Herman T. Lukens: A Study of Children's Drawings in the Early Years. *Pedagogical Seminary*, October, 1896. 15. Louise Maitland: Children's Drawings. *Pacific Educational Journal*, September, 1895. 16. M. V. O'Shea: Children's Expression Through Drawing. Proceedings and Addresses of National Educational Association for 1894. 17. T. G. Rooper: Drawing in Primary Schools. New York, 1894. 18. E. W. Scripture and C. S. Lyman: Drawing a Straight Line. *Studies from the Yale Psychological Laboratory* for 1893. 19. Milicent W. Shinn: Notes on the Development of a Child. Berkeley, 1893. 20. James Sully: Studies in Childhood. New York, 1896.

Teachers giving the test and classifying the papers, are requested to send us both the children's papers and their collated results. Those who do not care to collate the papers, are requested to give the test and send us the drawings.

Will S. Monroe.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

II. THE MONEY SENSE OF CHILDREN.

We want to know what the feeling of children is toward money; and at what time, in what manner, and how far we can wisely assist them to relate themselves to their world, through seeing the relative values of things in terms of money. These questions take immediate hold of our practical work at every point, and raise a variety of questions concerning the value of thrift as an educational agent and its possible reactions in moral and æsthetic directions.—*Earl Barnes.*

I. TEST.

After writing name (or sex) and age at the top of the sheet, ask the children to write answers to this question: "If you had a regular allowance of fifty cents a month to do with as you liked, what would you do with it?"

It may be necessary to tell the younger children the meaning of allowance; but make no other explanation; have no discussion, and answer no questions.

II. CLASSIFICATION.

Collate the answers under the two general headings of "save it" and "spend it" with the following suggested rubrics under each: (*a*). *Save it:* 1. For dress (hat, shoes, coat, etc.); 2. for other useful things (food, coal, wood, etc.); 3. for books or pictures; 4. to get an education; 5. for presents (Christmas, birthday, etc.); 6 for pleasure (doll, ball, bicycle, a party, etc.); 7. philanthropy (the poor, missionaries, church, Sabbath school). (*b*). *Spend it:* 1. For dress; 2. for other useful things; 3. for books or pictures; 4. to get an education; 5. for presents; 6. for pleasure; 7. for philanthropy.

III. PEDAGOGICAL QUESTIONS.

1. To what extent should the school influence conduct in regard to economic affairs? 2. How far can a child at any particular age understand money values? 3. Should children save money for the sake of accumulating? 4. Should they early be given a sense of the economic value of their clothes, their books and their playthings? 5. Should work in arithmetic be adjusted to their sense of money values? 6. Should children be encouraged to give money to organizations removed from their own immediate interests? 7. Should the school provide opportunities to call forth and stimulate the disposition to save money? 8. Should the school savings bank be an integral part of our educational system? Several of these questions are taken from the suggestive leaflet by Professor Earl Barnes.

IV. LITERATURE.

1. Anna Kohler: Children's Sense of money. *Studies in Education*, No. IX. Stanford University, Cal., 1897. 2. E. Kimber: Children's money sense. *Child Study Monthly*, June-July, 1897. 3. W. Cunningham: The use and abuse of money. New York, 1891. 4. Emile de Laveleye: Luxury. London, 1891. 5. Lucia True Ames: The Vanderbilt wedding; its ethical and economic aspects. *Cambridge Magazine*, February, 1896. 6. John Ruskin: Unto this last. London, 1862. 8. Hattie Mason Willard: Children's ambitions. *Studies in Education*, No. VII. Stanford University, Cal., 1897. 9. Agnes Lambert: School savings banks. *Nineteenth Century*, Vol. XIX. 10. Sara L. Oberholtzer: School savings banks. *American Academy of Political and Social Science*, Phila. 11. J. H. Thiry: School savings banks in the United States. New York, 1890. 12. D. B. King: Postal savings banks. *Popular Science Monthly*. Vol. XXVIII.

Teachers giving the test and classifying the papers, are requested to send us both the children's papers and their collated results. Those who do not care to collate the papers, are requested to give the test and send us the compositions.

Will S. Monroe.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

III. MEMORY TYPES OF CHILDREN.

The stream of thought flows on; but most of its segments fall into the bottomless abyss of oblivion. Of some, no memory survives the instant of their passage. Of others, it is confined to a few moments, hours, or days. Others again leave vestiges which are indestructible, and by means of which they may be recalled as long as life endures. Can we explain these differences?—*William James.*

I. TESTS.

(*a*) *First auditory:* Pronounce these words to the children: 1. stove, 2. bird, 3. match, 4. hill, 5. knife, 6. boy, 7. stone, 8. coat, 9. gun, 10. bread. Pronounce a word distinctly every three seconds in the order here given. One minute after you have finished, ask the children to reproduce the words in the order given.

(*b*) *Second auditory:* Twenty-four hours later ask the children to reproduce the list in the order given. Have no discussion on the words pronounced the preceding day.

(*c*) *First visual:* These words to be successively exposed: 1. tree, 2. lamp, 3. fish, 4. coat, 5. man, 6. book, 7. road, 8. pen, 9. door, 10. meat. Write on the blackboard and expose one word at a time for three seconds (erasing the exposed word before writing the next) until the list is completed. One minute after the last word has been erased, ask the children to reproduce the words in the order exposed.

(*d*) *Second visual:* Twenty-four hours later ask the children to reproduce the words exposed the preceding day and in the same order.

At least one day should intervene between the second auditory and the first visual test. *Name (or sex) and age of child on each paper.*

II. CLASSIFICATION.

The four tests are to be separately collated by sexes and ages as follows: 1. No. of correct words; 2. No. of correct words but not given in the order of the test; 3. No. of wrong (or omitted) words.

III. PEDAGOGICAL QUESTIONS.

1. Does the power of retaining and recalling memory images vary with different sexes and ages? 2. Does the visual memory excel the auditory? 3. To what extent does the power of association effect these two types of memory? 4. In what ways do the visual and auditory memory influence the child's acquisition of language?

IV. LITERATURE.

1. Chauncey J. Hawkins: Experiments on memory types. *Psychological Review*, Vol IV., No. 3. 2. Thaddeus L. Bolton: The growth of memory in school children. *American Journal of Psychology*, Vol. IV. 3. Catherine Aiken: Methods of mind-training. Harper, New York, 1895. 4. John C. Shaw: A test of the memory of school children. *Pedagogical Seminary*, Vol. IV., No. 1. 5. Ellen Bliss Talbot: An attempt to train the visual memory. *American Journal of Psychology*, Vol. VIII. 6. George R. Stetson: Some memory tests on whites and blacks. *Psychological Review*, Vol. IV., No, 3. 7. Th. Ribot: Diseases of memory. Appleton, New York, 1893. 8. Agnes Sinclair Holbrook: Memories of things read. *Studies in Education*, No. 2, Stanford University, Cal., 1896. 9. Anna Köhler: Special study on the historic memory of children. In "Studies in Historical Method," Heath, Boston, 1896. 10. W. H. Burnham: Memory historically and experimentally considered. *American Journal of Psychology*, Vol. II. 11. Joseph Jastrow: Eye-mindedness and ear-mindedness. *Popular Science Monthly*, Vol. XXXIII. 12. W. L. Bryan: Eye and ear mindedness. Proceedings of National Educational Association for 1893. 13. W. Preyer: The development of the intellect. Appleton, New York, 1889. 14. Gabriel Compayré: The intellectual and moral development of the child. Part I., Appleton, New York, 1896. 15. See also the subject of memory in the standard works on psychology by James, Ladd, Wundt, Külpe, J. Mark Baldwin, and Sully.

Teachers giving the test and classifying the papers, are requested to send us both the children's papers and their collated results. Those who do not care to collate the papers, are requested to give the test and send us the children's lists.

Will S. Monroe.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

IV. PERCEPTION OF CHILDREN.

Half the wealth of the world is lost to the most of us from the lack of power to perceive.—*Elizabeth Harrison.*

The first act of the human intellect consists of the ordering of the impressions made upon the organs of sense.—*Wilhelm Preyer.*

I. TEST.

Give each child a two cent stamp with this request: "Write an account of this postage stamp so that a person who had never seen it would know all about it." Give from twenty to thirty minutes for the exercise. Name (or sex) and age of child on each paper.

II. CLASSIFICATION.

(*a*) *Use:* 1. To carry letters; 2. to pay postage; 3. for stamp collectors. (*b*) *Substance:* 1. Made of paper; 2. mucilage on the back. (*c*) *Color:* 1. Red, carmine, light red, pink; 2. some other color; 3. shading. (*d*) *Form:* 1. Oblong; 2. square; 3. size (about 1x$\frac{7}{8}$ inch). (*e*) *Number:* 1. No. of sides; 2. date (or marks) of cancellation; 3. when first issued (1894). (*f*) *Portrait:* 1. Washington; 2. some one else; 3. style of hair. (*g*) *Inscriptions:* 1. "United States Postage"; 2. "Two cents"; 3. "2" (the two figures). (*h*) *Decorations:* 1. Perforated sides; 2. oval about the portrait; 3. white line (near the right, left, and under edges); 4. trefoils in upper corners; 5. scrolls about the figures 2; 6. fine horizontal parallel lines; 7. triangle in centre of lower edge. (*i*) *Miscellaneous.*

III. PEDAGOGICAL QUESTIONS.

The purpose of the study is to test the observing powers of children, to ascertain the things which appeal most strongly to boys and girls at different ages, and how early they begin to observe detail.

IV. LITERATURE.

1. Earl Barnes: A study of children's interests. *Studies in Education*, No VI., Stanford University, Cal., 1897. 2. G. Stanley Hall: Contents of children's minds on entering school. Kellogg, N. Y., 1893. The same in the *Princeton Review*, May, 1882, and the *Pedagogical Seminary*, June, 1891. 3. Edward R. Shaw: A comparative study on children's interests. *Child Study Monthly*, July–August, 1896. 4. J. M. Greenwood: What children know. *Proceedings of National Educational Association for 1884.* 5. Irene E. Dubois: Comparison. *Pacific Educational Journal*, November, 1894. 6. Wm. A. Hoyt: The love of nature. *Pedagogical Seminary*, October, 1894. 7. M. V. O'Shea: Interests in childhood. *Proceedings of National Educational Association for 1896.* 8. Katherine A. Chander: Children's interests in plants. *Studies in Education*, No. VI., Stanford University, Cal., 1897. 9. Wilhelm Preyer: Mental development in the child. Appleton, New York, 1895, Chapter, "First perceptions and ideas." 10. Kathleen Carter Moore: The mental development of a child. Macmillan, N. Y., 1896. 11. A French study of much importance is the article "Perception l'Enfant" in *Revue Philosophique* for December, 1890. 12. A German study of interest in this connection is the article "Vorstellungskreis der Berliner Kinder beim Eintritt in die Schule" in *Berlin Städtisches Jahrbuch* for 1870.

Teachers giving the test and classifying the papers are requested to send us both the children's papers and their collated results. Those who do not care to collate the papers are requested to give the test and send us the children's compositions.

Will S. Monroe.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

V. FATIGUE IN SCHOOL CHILDREN.

Under the strains and exhausting calls of modern civilized life, the power of endurance is rising continually in importance. Men and women have now-a-days to act rapidly for many hours and to act exceptionally well. It therefore seems very reasonable that teachers should direct their attention to some fair way of determining the relative power of endurance among their pupils. — *Francis Galton.*

I. Tests.

(*a*) Ask the pupils to copy from the school reader for a period, say, of five minutes, at the beginning of the school session; after an hour's work; at the close of the school day. Compare number of words copied and errors made in the extracts copied at the different periods.

(*b*) The same exercise may be given after recitations and study periods in given subjects, say, arithmetic, geography, drawing, history, singing, etc.

(*c*) A test similar to the first, but instead of copying, have numbers computed, and compare the amount of work and errors made in the computations of the different periods.

(*d*) Ascertain by personal interview with the parents or by questionnaire important facts of the child's home-life, such as amount and character of sleep, nutrition, exercise, outside work, headaches, sense defects, and other physical infirmities calculated to produce fatigue.

II. Pedagogical Questions.

(1) What physical and mental signs indicate the imminent approach of fatigue? (2) What forms of school work are best performed when the mind is refreshed? (3) To what extent may mental fatigue be counteracted by inserting between the periods of school work short rest pauses? In-door gymnastics? Out-door play? (4) What is the effect of the singing lesson on fatigued children? (5) How large a factor is arithmetic in the

production of school fatigue? (6) To what extent is fatigue conditioned by the performance of distasteful tasks? By other emotional states? By the weather? By "sitting still"?

III. Literature.

(*a*) *General.* — (1) Baker: Fatigue in School Children. *Educational Review*, Vol. XV., pp. 34-39. (2) Donaldson: Growth of the Brain, London, 1897, pp. 309-323. (3) Dressler: Fatigue. *Pedagogical Seminary*, Vol. II., pp. 102-106. (4) Lukens: School-fatigue Question in Germany. *Educational Review*, Vol. XV., pp. 246-254. (5) Mosso: La fatigue intellectuelle et physique. Paris 1894. (6) Warner: Growth and Means of Training the Mental Faculty. New York, 1890, pp. 74-86.

(*b*) *Mental Fatigue.* — (1) Binet and Henri: La fatigue intellectuelle. Paris, 1898 (reviewed by Schintz in *Pedagogical Seminary*, Vol. VI., pp. 129-132, and by Cattell in *Psychological Review*, Vol. V., pp. 428-430). (2) Burgerstein: Working Curve of an Hour. *Trans. of 7th Int. Cong. of Hygiene and Demography*, London, 1892, Vol. IV., pp. 87-95. (3) Ebbinghaus: Eine neue Methode zur Prüfung geistiger Fähigkeiten und ihre Anwendung bei Schulkindern. *Zeit. für Schulgesundheitspflege.* X Jahrgang, pp. 211-217. (4) Kemsies: Arbeitshygiene der Schule auf Grund von Ermüdungsmessungen. Berlin, 1898 (reviewed by Monroe in *Educational Review*, Vol. XVI., pp. 286-287). (5) O'Shea, Warner, Galton and Spitzner: Mental Fatigue in School. *Report of the Commissioner of Education for 1895-96*, Vol. II., pp. 1175-1198. (6) Richter: Mental Fatigue in School. *Report of the Commissioner of Education for 1894-95*, Vol. I., pp. 449-460.

(*c*) *Muscular Fatigue.* — (1) Bryan: Development of Voluntary Motor Ability. *American Journal of Psychology*, Vol. V., pp. 125-204. (2) Gilbert: Mental and Physical Development of School Children. *Studies from the Yale Psychological Laboratory*, Vol. II., pp. 63-68. (3) Lombard: Effect of Fatigue on Voluntary Muscular Contractions. *American Journal of Psychology*, Vol. III., pp. 24-42. (4) Scripture: The New Psychology, London, 1897, pp. 228-247.

(*d*) *Fatigue and Sense Defects.* — (1) Kratz: Fatigue and Sense Defects *Proc. of N. E. A.* for 1897, pp. 280-284. (2) Moore: Studies of Fatigue *Studies from the Yale Psychological Laboratory*, Vol. III., pp. 68-95. (3) Vannod: La fatigue intellectuelle et son influence sur la sensibilité cutanée, Geneva, 1896.

This outline is merely suggestive. There are such marked individual differences that teachers must study the fatigue tendencies of the individual children under their care. The bibliography is in no sense complete, but it gives much of the literature of the subject easily obtained in America.

WILL S. MONROE.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

VI. GROWTH OF CHILDREN.

When a system of annual physical measurements shall have been introduced into our public schools, and recognized as of equal importance with the annual examinations in the various studies, we shall be in a position to formulate the laws of growth with much greater accuracy than is at present possible. — *Henry P. Bowditch.*

I. Observations.

(*a*) *Stature.* — It is possible to measure in the school-room the stature of the children. The results may be compared with Bowditch's curve of the stature of the Boston school children or with Burk's "average" American boy and girl in his "Growth of Children in Height and Weight."

(*b*) *Weight.* — Rough results may be secured from the weight of children at their homes, and comparisons made with Burk and Bowditch as in stature.

(*c*) *Other Measurements.* — Lung-capacity, and length and breadth of head.

II. Pedagogical Questions.

(1) What adjustment of school work should there be to the periods of retarded growth? Accelerated growth? (2) In what ways does dentation effect growth? (3) To what extent do nutrition, exercise and disease condition growth? (4) Should we take into account the physical capacity of school children in arranging courses of study and assigning lessons? (5) Is there a physical basis of precocity? (6) Is mediocrity of mind to be associated with mediocrity of physique during the growing periods of the

child's life? (7) Should children whose weight is below the average of their age be permitted to enter a school grade beyond the average of their age except after physical examinations which make it probable that their strength will be equal to the strain?

III. Literature.

(*a*) *Laws conditioning Growth.* — (1) Burk: From fundamental to accessory in the development of the nervous system and of movements. *Pedagogical Seminary*, Vol. VI., pp. 5–64. (2) Burk: Growth of Children in Height and Weight. *American Journal of Psychology*, Vol. IX., pp. 253–326. (3) Donaldson: Growth of the Brain. London, 1896. (4) Lane: Some of the Laws which influence the Growth of a Child. *Trans. 7th. Int. Cong. of Hygiene and Demography*, Vol. IV., pp. 103–109. (5) Oppenheim: Development of the Child. New York, 1898, pp. 1–92. (6) Warner: Study of Children. New York, 1897, pp. 16–68.

(*b*) *Growth in Weight and Stature.* — (1) Barnes: Physical Development of Oakland Children. *Oakland (Cal.) School Report for 1891–92.* (2) Boas: Growth of Toronto Children. *Report of Commissioner of Education for 1896–97*, Vol. II., pp. 1541-1599. (3) Bowditch: Growth of Children. *Papers on Anthropometry*, Boston, 1894, pp. 65–116, and tables. (4) Bowditch: Growth of Children studied by Galton's method of Percentile Grades. *22nd An. Report State Bd. Health of Mass.*, pp. 479-522. (5) Burk: Growth of Children in Height and Weight. *Am. Journal of Psychology*, Vol. IX., pp. 253–326. (6) Donaldson: Growth of the Brain. London, 1896, pp. 45–83. (7) Gilbert: Researches on the Mental and Physical Development of School Children. *Studies from Yale Psychological Laboratory*, Vol. II., pp. 40–100. (8) Greenwood: Heights and Weights of Children. *Report of the Board of Education of Kansas City for 1890–91*, pp. 48–56. (9) Peckham: Growth of Children. *6th An. Report State Bd. Health of Wisconsin*, pp. 28–73. (10) Porter: Growth of St. Louis Children. *Trans. of Acad. of Science at St. Louis*, Vol. VI., pp. 263–380 and 46 plates. (11) West: Anthropometrische Untersuchungen über die Schulkinder in Worcester, Mass. *Archiv für Anthropologie*, Vol. XXII, pp. 13–48. (Summarized in *Science*, Vol. XXI., pp. 2-4).

(*c*) *Growth and Adolescence.* — Outline number VII., in this series will be devoted to the Psychology of Adolescence.

(*d*) *Growth and Mental Efficiency.* — (1) Gilbert: Researches upon School Children and College Students. *University of Iowa Studies in*

Psychology, Vol. I., pp. 1–39. (2) KLINE: Truancy as related to the Migratory Instinct. *Pedagogical Seminary*, Vol. V., pp. 403-420. (3) PORTER: The Physical Basis of Precocity and Dulness. *Trans. of Acad. of Science at St. Louis*, Vol. VI., pp. 161–181 (reprinted in *American Physical Education Review*, Vol. II., pp. 155–173). (4) TARBELL: On the Height, Weight, and Relative Rate of Growth of Normal and Feeble-minded Children. *Proc. 6th An. Session As. of Med. Off. Am. Inst. for Idiotic and Feeble-minded Persons*, pp. 188–189, with curves. (5) WARNER: Physical and Mental Condition of Children. *Report of Com. of Ed. for 1890-91*, Vol. II., pp. 1081–1138. (6) WEST: Observations of the Relation of Physical Development to Intellectual Ability made on the School Children of Toronto, Canada. *Science*, Vol. IV. (new series), pp. 156–159.

(*e*) *Growth and Resistance to Disease.* — (1) Combe: Körperlänge und Wachstum der Volksschulkinder in Lausanne. *Zeit. für Schulgesundheitspflege*, Vol. IX., pp. 569-589. (2) HARTWELL: [Correlation of Growth and Death-rates of Boston Children]. *Report of Director of Physical Training*, Boston, 1894, pp. 18–60. (3) KEY: Die Pubertätsentwicklung. *Xth Int. Med. Cong.*, Berlin, 1891, Vol. I., pp. 66–130.

(*f*) *Senescence, — Old Age and Death.* — (1) BEARD: American Nervousness, New York, 1881, pp. 193-292. (2) DONALDSON: Growth of the Brain. London, 1896, pp. 324-335. (3) HUMPHREY: Old Age. Cambridge, 1890. (4) MAUDSLEY: Pathology of Mind. New York, 1894, pp. 472–477. (5) MERCIER: Sanity and Insanity. London, 1895, pp. 302–312. (6) SCOTT: Old Age and Death. *American Journal of Psychology*, Vol. VIII., pp. 67–122. (7) WEISMANN: Essays upon Heredity and Kindred Biological Problems. Oxford, 1891, Vol. I., pp. 5-66 and 107–161. (8) WILLE: Old Age and its Psychoses. *Tuke's Dictionary of Psychological Medicine*, Vol. II., pp. 869–873.

WILL S. MONROE.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

VII. PSYCHOLOGY OF ADOLESCENCE.

We are born twice — once to exist and once to live again; once as to species and again with regard to sex. — *Rousseau.*

Just as the study of the psychology of childhood is an indispensable part of the training of every teacher in the lower grades, so a study of the psychology of adolescence should form a part of the education of every teacher in the higher grades. — *Wm. H. Burnham.*

I. Observations.

(*a*) Note physical changes: (1) Growth. (2) Form and features. (3) Health. (4) Duration and changes of sleep. (5) Kinds and amount of food. (6) Tendency to nervousness and irritability. (7) Energy and activity.

(*b*) Note mental changes and peculiarities: (1) Ideals and ambitions. (2) Language and expression. (3) Selfishness and altruism. (4) Fondness or aversion for home, school and church. (5) Tastes in reading. (6) Attitude toward nature, art and religion. (7) Habits and morals.

II. Pedagogical Questions.

(1) What studies are easier or more difficult during adolescence? (2) What disposition to change studies, leave school or defy authority? (3) What changes of sentiments and relations toward teachers? (4) What teasing or bullying tendencies are developed? (5) Are there spells of despondency and gloom? (6) What outcrops of marked ancestral characteristics? (7) What forms of companionship are oftenest sought? (8) What unusual friendships for the same or other sex? (9) What fears and superstitions are most apparent? (10) Are there pronounced ambitions with reference to future vocations?

III. Literature.

(*a*) *Adolescence.* — (1) Atkinson: Child Study in Secondary Schools. *School Review*, Vol. V., pp. 461–466. (2) Boone: Lines of Growth in Maturing. *Educational Review*, Vol. XIV., pp. 118–131. (3) Burk: Teasing and Bullying. *Pedagogical Seminary*, Vol. IV., pp. 336-371. (4) Burnham: Study of Adolescence. *Pedagogical Seminary*, Vol. I., pp. 174–195. (5) Burnham: Suggestions from the Psychology of Adolescence. *School Review*, Vol. V., pp. 652–665. (6) Clouston: Neuroses of Development. Edinburgh, 1891, pp. 110–130. (7) Jacobs: Values in Secondary Education. *Educational Review*, Vol. IX., pp. 135–147. (8) Kennedy: Effect of High School Work upon Girls during Adolescence. *Pedagogical Seminary*, Vol. III., pp. 469–482. (9) Krohn: The Most Critical Period of School Life. *Child Study Monthly*, Vol. I., pp. 33–44. (10) Lancaster: Psychology and Pedagogy of Adolescence. *Pedagogical Seminary*, Vol. V., pp. 61–128. (11) Putnam-Jacobi: Care of the Adolescent Girl. *Mother's Voice*, Vol. II., pp. 2-15. (12) Seerley: Dangers of the Adolescent Period. *Educational Foundations*, New York, 1898. (13) Swift: Heredity and Environment, — a Study in Adolescence. *Northwestern Monthly*, Vol. IX., pp. 36–40. (14) Warner: The Study of Children. New York, 1897, pp. 188–197. (15) Groos: Über die Necklust. *Die Kinderfehler*, Vol. III., pp. 33–39.

(*b*) *Adolescence and Pubescence.* — (1) Barnes: Feelings and Ideas of Sex in Children. *Pedagogical Seminary*, Vol. II., 199–203. (2) Bentley: Sex Differences that have been brought out by Child Study. *Northwestern Monthly*, Vol. VIII., pp. 257–261. (3) Ellis: Man and Woman. London, 1896, pp. 1–30. (4) Madden: Puberty, — its Pathology and Hygiene. *Keating's Cyclopædia of Diseases of Children*, Vol. I., pp. 389-416. (5) Ribot: Psychology of the Emotions. London, 1897, pp. 248-259. (6) Scott: Psychology of Puberty and Adolescence. *Proc. of the N. E. A.* for 1897, pp. 843–851. (7) Yoder: Pubescence. *Northwestern Monthly*, Vol. VIII., pp. 597–600. (8) Verrier: L'Hygiéne de l'Adolescence. Paris, 1887.

(*c*) *Adolescence and Growth.* — See outline number VI. in this series, "Growth of School Children."

(*d*) *Adolescence and Religious Training.* — (1) Coe: Morbid Conscience of Adolescents. *Trans. Ill. Soc. for Child Study*, Vol. III., pp. 97-108. (2) Daniels: The New Life, — a Study of Regeneration. *American Journal of Psychology*, Vol. VI., pp. 61-106. (3) Gulick: Sex and Religion. *As-*

sociation Outlook (Springfield, Mass.), October, 1897–July, 1898. (4) HALL: Moral and Religious Training of Children and Adolescents. *Pedagogical Seminary*, Vol. I., pp. 196–210. (5) STARBUCK: Study of Conversion. *American Journal of Psychology*, Vol. VIII., pp. 268–308.

(*e*) *Pathology of Adolescence.* — (1) BOHANNON: Study of Peculiar and Exceptional Children. *Pedagogical Seminary*, Vol. IV. pp. 3–60. (2) CLOUSTON: Insanities of Puberty and Adolescence. *Tuke's Dic. of Psy. Med.*, Vol. I., pp. 360–371. (3) DAWSON: Study in Youthful Degeneracy. *Pedagogical Seminary*, Vol. IV., pp. 221–258. (4) MAUDSLEY: Pathology of Mind. New York, 1894, pp. 449–463. (5) MERCIER: Sanity and Insanity. London, 1895, pp. 209–232. (6) ZIEHEN: Affecktstörungen. *Rein's Encyklopädisches Handbuck der Pädagogik*, Vol. I., pp. 39–41.

(*f*) *Reminiscent Studies in Adolescence.* — See the autobiographies of John Stuart Mill, Marie Bashkirtseff, Tolstoi, Rousseau and George Sand.

The chief object of this outline is to call attention to the need of studying the adolescent period of the child's life and to indicate the literature of the subject. The forthcoming book on adolescence by President G. Stanley Hall, of Clark University, Worcester, Mass., will undoubtedly be the most important treatment of the problem from the pedagogic stand-point.

WILL S. MONROE.

STATE NORMAL SCHOOL,

WESTFIELD, MASS.

Child Study Outlines: Second Series.

VIII. IMITATION IN CHILDHOOD.

Everything that he [the child] learns is copied, reproduced, assimilated from his fellows; and all of them, including him, — all the fellows, the socii, — do and think, what they do and think because they have each been through the same course of copying, reproducing, and assimilating that he has. — *J. Mark Baldwin.*

The frequent exhortations to teachers that they shall make their young charges *not* imitative *but* spontaneous in thought (as if one could become rationally spontaneo except through imitation), all such errors rest on a false separation of inventiveness and spontaneity, a separation which can be avoided only through a careful psychological study of these fascinating processes. — *Josiah Royce.*

I. Observations.

(*a*) Teachers are requested to note the imitative tendencies in children with reference to (1) play and (2) conduct. In connection with each observation the name (or sex) and age of the child is desired, and a brief statement of the causes conditioning the imitation.

(*b*) We are making a collection of the counting-out rhymes used by children in their games. Get the older pupils to write out such rhymes and send them to us.

II. Literature.

(*a*) *Laws governing Imitation.* — (1) Baldwin: Imitation: a Chapter in the Natural History of Consciousness. *Mind*, Jan., 1894, Vol. III. (N. S.), pp. 26-55. (2) Baldwin: Mental Development in the Child and in the Race. New York, 1895, pp. 263-366. (3) Harris: Psychologic Foundations of Education. New York, 1898, pp. 295-306. (4) Harris: Psychology of the Imitation Function in Childhood as related to the Process of Learning. *Report of Com. of Education* for 1896-97. Vol. I., pp. 676-685. (5) Royce: Imitative Functions. *Century Magazine*, Dec., 1894, Vol.

XXVI. (N. S.), pp. 137–145. (6) ROYCE: Preliminary Report on Imitation. *Psychological Review*, May 1895, Vol II., pp. 217–235. (7) TARDE: Des Lois de l'Imitation. Paris, 1896, p. 428. (8) TUKE: Imitation. *Tuke's Dictionary of Psychological Medicine*, Vol. II., pp. 676-678. (9) VAN LIEW: Some Educational Bearings of the Principle of Imitation. *Northwestern Monthly*, Vol. VIII., pp. 320-327.

(*b*) *Imitation in the Child.* — (1) BALDWIN: About Children. *Century Magazine*, Vol. XXVII. (N. S.), pp. 308-310. (2) FREAR-BURK: Imitation. *Pedagogical Seminary*, April, 1897, Vol. IV., pp. 382-387. (3) HASKELL: Imitation in Children. *Pedagogical Seminary*, Oct., 1894, Vol. III., pp. 30–47. (4) RUSSELL: Child Observations. First Series: Imitation and Allied Activities. Boston, 1896, p. 267. (5) SUDBOROUGH: What Children Imitate. *Northwestern Monthly*, Vol. VIII., pp. 99, 136, 162, 226, 300, 332. (6) WALDO: Imitation in Children. *Child Study Monthly*, Vol. II., pp. 75–87.

(*c*) *Imitation and Originality.* — (1) BALDWIN: Social and Ethical Interpretations in Mental Development. New York, 1897, pp. 90-125. (2) JAMES: Principles of Psychology. New York, 1890, Vol. II., chapter XXVIII. (3) ROYCE: Psychology of Invention. *Psychological Review*, March, 1898, Vol. V., pp. 113-144. (4) URBAN: Psychology of Sufficient Reason. *Psychological Review*, July, 1897, Vol. IV., pp. 361-373.

(*d*) *Imitation and Suggestion.* — Outline number IX. in this series will be devoted to the Suggestibility of Children.

(*e*) *Imitation and Play.* — (1) BOLTON: Counting-out Rhymes of Children. New York, 1888, p. 123. (2) CHAMBERLAIN: Child and Childhood in Folk-Thought. New York, 1896, pp. 194-198. (3) CULIN: Street Games of Brooklyn. *Journal of American Folk-Lore*, July-Sept., 1891, Vol. IV, pp 221-237. (4) GROOS: Play of Animals. New York, 1898, pp. 178-214. (5) NEWELL: Games and Songs of American Children New York, 1884, p. 242.

(*f*) *Imitation in Animals.* — (1) GROOS: Play in Animals. New York, 1898, p. 341. (2) MORGAN: Animal Life and Intelligence. Boston, 1891, pp. 443-455. (3) MORGAN: Instinct and Habit. London, 1896, pp. 166–185. (4) NOBLE: Imitation among Atoms and Organisms. *Popular Science Monthly*, Vol. XLVIII, pp. 492-509. (5) ROMANES: Mental Evolution in Animals. New York, 1895, pp. 219-229.

Observations will be thankfully received from graduates of the Westfield Normal School and other teachers. These may be sent to Principal Charles S. Chapin or the undersigned.

WILL S. MONROE.

STATE NORMAL SCHOOL,

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Child Study Outlines: Second Series.

IX. SUGGESTIBILITY OF CHILDREN.

Every idea that is suggested to us awakens our thoughts and our associations, and stimulates our conscious mind to action. — *Louis Waldstein.*

With public opinion ruling more and more the world, the psychology of public opinion, the sources of its strength and weakness, its pathology and hygiene, and the causes of its stability and its alterations, ought to be studied with ever-increasing care by those interested in the welfare of mankind. — *William James.*

I. Observations.

(*a*) Ask the children in the elementary schools to write a composition on any collections they may have made, — stamps, marbles, buttons, etc., — stating (1) the character and size of the collection, (2) why the collection was made, and (3) what has been (or is to be) done with it. The name of the child (or sex) and age should be on each composition.

(*b*) Reminiscent studies are desired from older students, — in high schools, normal schools and colleges. These should state: (1) The character of the collections; (2) the interest which led him to make it; (3) feeling toward it; (4) how long the interest in the collection continued; (5) what disposition was finally made of it; and (6) a statement of its educational value to the student in his mental development.

II. Literature.

(*a*) *General.* — (1) Baldwin: Mental Development in the Child and the Race. New York, 1895, pp. 104–169. (2) Bernheim: Suggestion and Hypnotism. *Tuke's Dictionary of Psychological Medicine*, Vol. II., pp. 1113–1117. (3) Binet et Henri: De la Suggestibilité naturelle chez les Enfants. *Revue Philosophique*, Vol. XXXVIII., pp. 337–348. (4) Hudson: Suggestion as a Factor in Human Life. *Medico-Legal Journal*, Vol. XIV., pp. 319–322. (5) Huntington: Unconscious Tuition. *Barnard's Ameri-*

can Journal of Education, Vol. I., pp. 141–163. (6) LE BON: The Crowd: a Study of the Popular Mind. New York, 1896, p. 320. (7) JAMES: Principles of Psychology. New York, 1890, Vol. II, pp. 593–616. (8) MORGAN: Comparative Psychology. London, 1896, pp. 60–85. (9) SIDIS: Psychology of Suggestion. New York, 1898, pp. 5–90. (10) WRENDT: Human and Animal Psychology. London, 1896, pp. 328–339.

(*b*) *Educational Applications of Suggestion.* — (1) BERILLON: De la Suggestion et de ses Applications à la Pédagogie. Paris, 1888, p. 16. (2) BERILLON: Les Principes de la Pédagogie suggestive. *Revue de la Hypnotisme*, Vol. XII., pp. 161–168. (3) BINET and FÉRÉ: Animal Magnetism. New York, 1888, pp. 352–360. (4) GUYAU: Education and Heredity. London, 1897, pp. 1–45. (5) LUKENS: Method of Suggestion in the Cure of Faults. *Northwestern Monthly*, May, 1898, Vol. VIII., pp. 592–595. (6) PIGEAUD: La Suggestion en Pédagogie: Dangers et Avantages. Paris, 1897, p. 127. (7) SMALL: Suggestibility of Children. *Pedagogical Seminary*, Dec., 1896, Vol. IV., pp. 176–220. (8) THOMAS: La Suggestion: son Rôle dans l'Education. Paris, 1895.

(*c*) *Suggestion and Emotional States.* — (1) BALDWIN: Bashfulness in Children. *Educational Review*, Dec., 1894, Vol. VIII., pp. 434–441. (2) DESPINE: De la Contagion morale. Paris, 1870. (3) GRAY: Children's Crusade. Boston, 1870, p. 242. (4) PARTRIDGE: Blushing. *Pedagogical Seminary*, April, 1897, Vol. IV., pp 387–394. (5) MONROE: Entwickelung der sozialen Vorstellungen des Kindes Berlin, Reuther und Reichard, 1899 (chapter VII. discusses the social suggestibility of fears and superstitions).

(*d*) *Suggestion and Imitation.* — Outline number VIII in this series suggests observations and literature for the study of imitation.

(*e*) *Suggestive Elements in Children's Plays, Collections and Organizations.* — (1) BARNES: Children's Collections. *Barnes' Studies in Education*, pp. 144–146. (2) BARUS: History of a Child's Passion. Washington, 1895, p. 8. (3) HALL: Story of a Sand Pile. *Scribner's Magazine*, Vol. III., pp. 690–696. (4) NEWELL: Games and Songs of American Children. New York, 1884, p. 242. (5) SHELDON: Institutional Activities of American Children. *American Journal of Psychology*, Vol. IX., pp. 425–448.

(*f*) *Suggestion and Automatisms.* — (1) BINET and FÉRÉ: Animal Magnetism. New York, 1888, pp. 277–303. (2) JANET: L'Automatisme psychologique. Paris, 1889. (3) LINDLEY and PARTRIDGE: Some Mental Automatisms. *Pedagogical Seminary*, July, 1897, Vol. V., pp. 41–60. (4) MONROE: Chorea Among Public School Children. *American Physical Education Review*, March, 1898, Vol., III., pp 19–24. (5) NEWBOLD: Interpretations of Automatisms. *Popular Science Monthly*, Feb., 1897, Vol. L., pp. 507–517. (6) SCHAFFER: Suggestion und Reflex. Jena, 1896, p. 113.

(*g*) *Hygiene and Pathology.* — (1) BERNHEIM: Suggestive Therapeutics. New York, 1889, pp. 192–217. (2) LASÈGUE ET FALRET: La Folie à Deux ou Folie Communiquée. *Annales Médicale Psychologique*, Nov.,

1877. (3) TUKE: Communicated Insanity. *Tuke's Dictionary of Psychological Medicine*, Vol. I., pp. 240-242. (4) WALDSTEIN: Subconscious Self and its Relation to Education and Health. New York, 1897, pp. 111–125.

Compositions on children's collections from the schools of graduates of the Westfield Normal School, as well as from other teachers, will be thankfully received. These may be sent to Principal Charles S. Chapin or the undersigned.

WILL S. MONROE.

CONTENTS.

I. Children's Spontaneous Drawings.

II. The Money Sense of Children.

III. Memory Types of Children.

IV. Perception of Children.

V. Fatigue in School Children.

VI. Growth of Children.

VII. Psychology of Adolescence.

VIII. Imitation in Childhood.

IX. Suggestibility of Children.

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